UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,063	07/22/2003	Venkateshwar Rao Pullela	79771	8263

26327   7590   09/06/2006

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EXAMINER
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ART UNIT	PAPER NUMBER
2188	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2006*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-8,10,12-17 and 20-29* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-8,10,12-17 and 20-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/22/06 6/22/06*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set for in 37 CFR 1.17(e), was

filed in this application after final rejection. Since this application is eligible for continued examination under 37

CFR 1.1 14, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.1 14. Applicant's submission filed on 6/22/06 has been entered.

Claims 1-28 have been presented for examination in this application. In response to the

last office action, specification has been amended, claims 1,9,11,18,19 have been cancelled,

claims 26-29 have been added. As the result, claims 2-8,10,12-17,20-29 are now pending in this

application.

Claims 2-8,10,12-17,20-29 are rejected.

Applicant's arguments filed 6/22/06 have been fully considered but they are not

persuasive. Therefore, the rejections from the previous office action are respectfully maintained,

with changes as needed to address the amendments.

All rejections and objections not explicitly repeated below are withdrawn.

In the remarks filed 6/22/06, Examiner notes typographical errors as follows:

In page 3 of the remark, line 2, the word "clams" should be replaced as "claims"; page 3

line 14 "clam 3" should be replaced by "claim 3".

Information Disclosure Statement

The Information Disclosure Statement(s) received 1/22/06 6/22/06 have been

considered. Please see attached PTO-1449(s).

Claim Rejection 35 USC 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or

any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and

requirements of this title.

Claims 12-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

As for claim 12, a computer-readable medium as described in the specification on page 7,

paragraph begin with line 12 includes "storage mechanism". The "storage mechanism" includes

"storage device and other mechanism for maintaining instruction or data in any format". There is

not a requirement that storage mechanism to be storage media to store instructions or data.

Furthermore, the "storage device" includes "network services" which can be interpreted broadly

as any functions implementing over a vast network. It makes the scope of the computer-readable

medium unclear.

Examiner acknowledges that applicant-amending claim 12 to address the above issue.

The amended claim reciting "a computer-readable medium tangibly embodying computer-

executable instructions for performing steps..". However, in light of the specification's page 7, it

is still unclear that the embodying of instructions requiring any storing of these instructions in

the media or merely maintaining these instructions while they are in transist. Examiner requests

the claim to be amended to include the storing of these instructions in light of specification's

page 7.

Since the computer-readable medium is directed to non-statutory subject matter, as such

the claim is not limited to statutory subject matter and is therefore non-statutory.

All dependent claims are rejected as having the same deficiencies as the claims they

depend from.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed

in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United

States and was published under Article 21(2) of such treaty in the English language.

Claims 2,4-8,12-17,20,22-29 rejected under 35 U.S.C. 102 (e) as being anticipated by

Ikeda et al (US 6788683).

As in claim 2, Ikeda describes a method for processing packets, the method comprising:

identifying a packet (Ikeda's Fig 1: #1); identifying a flow identification value based on the

packet (Ikeda's Fig 1: #21 received VPI/VCI) ; performing a lookup based on the flow

identifying value to identifying a flow identification value mask (Ikeda's Fig 1: #3 lookup

retrieval table to identify retrieval flag; column 3 lines 20-30); and masking the flow

identification value with the flow identification value mask to generate a masked flow

identification value (Ikeda's Fig 1: #26 retrieval key; column 3 lines 20-30).

As in claim 4, Ikeda describes wherein the flow identification value includes at least two

items of the list consisting of source address, destination address, source port, destination port,

and protocol type (Ikeda's Fig 2 shows the retrieve flag to mask corresponding fields in the

packet header such as source address, destination address).

As in claim 5, Ikeda describes wherein the flow identification value includes a transport

layer, session layer, presentation layer or application layer value (Ikeda's column 1, lines 47-55).

As in claim 6,the claim recites wherein said performing a lookup based on the flow

identification value includes performing a lookup operation in an access control list. Ikeda

describes a lookup of the retrieval flag table (Fig 1: #3), which is based on the information from

a received IP packet. The lookup information in the retrieval flag table is used to further filter

packets in a router (Fig 2: #5,7). Thus the retrieval flag table functions as the claim's access

control list.

As in claim 7, the claim recites wherein said performing the lookup operation based on

the flow identification value includes: performing a first lookup operation on a first set of

associative memory entries based on the flow identification value to generate an associative

memory result; and performing a second lookup operation in an adjunct memory based on the

associative memory result to identify the flow identification value mask. Examiner notes that the

claim describing a standard lookup function of a content addressable memory and retrieving data

from its associating ram portion. Ikeda describes the retrieval flag table (Fig 1: #3), which is

looked up using the header information from received packet. The retrieval flag table is used to

retrieve retrieval flag which corresponding to the claim's identification value mask. Since the

lookup of the retrieve flag table based on the matching of fields in a received IP packet. It's

inherently the retrieve flag table to be implemented using an associative memory device such as

content addressable memory and it's associating ram portion.

Claim 8 rejected based on the same rationale as in the rejection of claim 6.

Claim 20 rejected based on the same rationale as in the rejection of claim 2.

Claim 22 rejected based on the same rationale as in the rejection of claim 4.

Claim 23 rejected based on the same rationale as in the rejection of claim 5.

Claim 24 rejected based on the same rationale as in the rejection of claim 6.

Claim 25 rejected based on the same rationale as in the rejection of claim 7.

As in claims 26-27, the claims recite means for processing the packet based on the

masked flow identification value (claim 26); processing the packet based on said generated

masked flow identification value (claim 27). Ikeda's Fig 1 discloses a flow processing device

that processes the packet based on the masked flow identification value (based on concatenated

value of fields/parts VPI/VCI, flow retrieval key etc..).

As in claims 28-29, the claims recite the packet processing engine is configured to

process the packet based on the masked flow identification value (claim 28); wherein said step

includes: processing the packet based on said generated masked flow identification value (claim

29). Ikeda's Fig 1: #5 shows the flow processing device process the packet based on the masked

flow identification value (Ikeda's Fig 1 processes the retrieval key that corresponds to the

masked flow identification value).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in

section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the

manner in which the invention was made.

Claims 3,10,21 rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al

(US 6788683) as applied to claims 2,20 respectively and further in view of Yasue (US Pub

2004/0028041).

As in claim 3, the claim recites updating a data structure based on the masked flow

identification value. Ikeda does not describe the claim's detail of updating a data structure.

However, Yasue describes a memory (Yasue's Fig 9: #71), which uses the flow information (Fig

9: flow no 90f) to keep track and updating a statistic value such as received byte number of

packets (Fig 9: #s11). It would have been obvious to one of ordinary skill in the art at the time of

invention to include statistic value as suggested by Yasue in Ikeda's system to keep track of

bytes being received and thereby determining a violation of band policy (Yasue's page 6,

paragraphs 128, 133).

Claim 10 recites the limitations of claims 2 and 3. Therefore, the claim is rejected based

on the same rationale as in the rejection of claims 2-3.

Claim 21 rejected based on the same rationale as in the rejection of claim 3.

Response to Arguments

Applicant's arguments filed 6/22/06 in response to the last office action has been fully considered but they are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

I) In page 9 lines 6-7, it is unclear why Applicant addressing claim 1, since claim 1 has been cancelled. Examiner inteprets the argument being directed to claim 2.

II) Similarly, in page 9 second paragraph, applicant alleged that the rejection of claims 19-27 does not meet the prima facie requirement. However, applicant fails to specifically point out any error in the rejections for claims 19 to 27.Examiner notes that claim 19 has been cancelled.

III) In response to argument in page 9 third paragraph to page 11 third paragraph, concerning claim 2, applicant alleges that the reference does not teach limitations of claim 2. Examiner respectfully disagrees.

Claim 2 having the following limitations:

a) identify a packet; identifying a flow identification value based on the packet.

b) performing a lookup based on the flow identification value to identify a flow identification value mask; and

c) masking the flow identification value with the flow identification value mask to generate a masked flow identification value.

The claim merely requires "identify a packet", there is not any claimed requirement for a specific type of packet **such as ATM cell packet** or IP packet as Applicant's alleging in page 10 lines 5-9. In fact, specification page 5 states:

"the term "packet" refers to packets of all types or any other units of including but not limited to , **fixed length cells** .... The term packet as used herein also refers to both the packet itself or a packet indication, such as, but not limited to all or part of a packet or packet header...or any other part or identification of the packet".

Therefore, the packet as described, can be understood to represent any type packets such as ATM cell packet, IP packet etc.. And any parts/fields of the packet can be considered as information value to identify the flow of such packet (Specification's page 11 lines 9-19 discloses the flow identification value having many different fields/parts, and any of these fields can be used to identify the flow of the packet). Specification's page 10 lines 10-26 further discloses the information being used as flow identification value comprises fields/parts associated with transport layers or other layers as well, such as source address, destination address, source port, destination port etc..(see specifcation's Fig 1B for fields/parts being used as flow identification values).

In a similar manner, Ikeda discloses a flow identification device, receiving a packet (Ikeda's Fig 1), using a field/part of information in the packet, VPI/VCI to identify the flow of the packet (corresponding to a field in the claim's flow identification value); lookup for retrieval flag, Ikeda's Fig 1: #3 (corresponding to the claim's limitation b, lookup and identify a flow identification maskvalue), this retrieval flag is used to mask the flow retrieval key, which is a field/part of the packet being used to identify flow of the packet (corresponding to masking the

claim's limitation c, masking flow identification value). Both fields/parts in the packet, Ikeda's

VPI/VCI and flow retrieve key, are being used to identify the flow of the packet, therefore

together they comprise the value corresponding to the claim's flow identification value.

In conclusion, contrast to applicant's arguments on page 11, since Ikeda's VPI/PCI and

flow retrieval key are fields/parts of a same entity that corresponds to the claim's "flow

identification value", therefore, Ikeda teaches all limitations in the claim 2.

Claims 10,12,20 are rejected based on the same rationale as discussed above.

Conclusion

When responding to the office action, Applicant is advised to provide the examiner with

the line numbers and page numbers in the application and/or references cited to assist examiner

to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The

examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DD

Mano Padmanabhan 9/5/06

Supervisory Patent Examiner

Art Unit 2188

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SUPERVISORY PATENT EXAMINER